

This listing of claims will replace all prior versions of claims in the application.

Claim 1. (currently amended) A coated substrate comprising:
an antireflective composition layer comprising as separate components (i) a basic material, (ii) a crosslinker, (iii) an acid or acid generator compound, and (iv) a resin, and
a photoresist layer over the antireflective composition layer, the photoresist comprising a resin that comprises photoacid-labile acetal or ketal groups.

Claim 2. (original) The substrate of claim 1 wherein the basic material has a pKa of about 3 or greater.

Claim 3. (original) The substrate of claim 1 wherein the basic material has a pKa of about 6 or greater.

Claim 4. (original) The substrate of claim 1 wherein the basic material has a pKa of about 9 or greater.

Claim 5. (previously presented) The substrate of claim 1 wherein the basic material contains one or more N, O or S atoms.

Claim 6. (previously presented) The substrate of claim 1 wherein the basic material contains one or more amine groups.

Claim 7. (previously presented) The substrate of claim 1 wherein the basic material contains one or more hydroxy, ether, or sulfide groups.

Claim 8. (previously presented) The substrate of claim 1 wherein the basic material has a molecular weight of less than about 500.

Claim 9. (previously presented) The substrate of claim 1 wherein the basic material is a polymeric material

Claim 10. (previously presented) The substrate of claim 1 wherein the antireflective composition is crosslinked.

Claim 11. (previously presented) The substrate of claim 1 wherein the antireflective composition comprises an acid or acid generator compound.

Claim 12. (previously presented) The substrate of claim 1 wherein the antireflective composition comprises a thermal acid generator and a photoacid generator compound.

Claim 13. (previously presented) The substrate of claim 1 wherein the antireflective layer comprises a resin distinct from a polymeric basic material.

Claim 14. (previously presented) The substrate of claim 1 wherein the antireflective layer comprises aromatic groups.

Claim 15. (previously presented) The substrate of claim 1 wherein the antireflective layer comprises anthracenyl, naphthylene or phenyl groups.

Claims 16-17. (cancelled)

Claim 18. (currently amended) A method for forming a photoresist relief image, comprising:

applying an antireflective composition on a substrate, the antireflective composition comprising as separate components (i) a basic material, (ii) a crosslinker, (iii) an acid or acid generator compound, and (iv) a resin,

applying a photoresist layer over the antireflective composition layer, the photoresist comprising a resin that comprises photoacid-labile acetal or ketal groups; and

exposing and developing the photoresist layer to provide a resist relief image.

Claim 19. (original) The method of claim 18 wherein the antireflective layer is crosslinked prior to application of the photoresist layer.

Claim 20. (original) The method of claim 18 wherein the antireflective layer is thermally cured prior to application of the photoresist layer.

Claim 21. (previously presented) The method of claim 18 wherein the basic material has a pKa of about 3 or greater.

Claim 22. (previously presented) The method of claim 18 wherein the basic material has a pKa of about 6 or greater.

Claim 23. (previously presented) The method of claim 18 wherein the basic material has a pKa of about 9 or greater.

Claim 24. (previously presented) The method of claim 18 wherein the basic material contains one or more N, O or S atoms.

Claim 25. (previously presented) The method of claim 18 wherein the basic material contains one or more amine groups.

Claim 26. (previously presented) The method of claim 18 wherein the basic material contains one or more hydroxy, ether, or sulfide groups.

Claim 27. (previously presented) The method of claim 18 wherein the basic material has a molecular weight of less than about 500.

Claim 28. (previously presented) The method of claim 18 wherein the basic material is a polymeric material

Claim 29. (previously presented) The method of claim 18 wherein the antireflective composition comprises an acid or acid generator compound.

Claim 30. (previously presented) The method of claim 18 wherein the antireflective composition comprises a thermal acid generator and a photoacid generator compound.

Claim 31. (previously presented) The method of claim 18 wherein the antireflective layer comprises a resin distinct from a polymeric basic material.

Claim 32. (previously presented) The method of claim 18 wherein the antireflective layer comprises aromatic groups.

Claim 33. (previously presented) The method of claim 18 wherein the photoresist layer is exposed with patterned radiation having a wavelength of about 260 nm or less.

Claim 34. (previously presented) The method of claim 18 wherein the photoresist layer is exposed with patterned radiation having a wavelength of about 248 nm, 193 nm or 157 nm.

Claim 35. (previously presented) The method of claim 18 wherein the photoresist layer is exposed with radiation having a wavelength of about 248 nm and the antireflective layer comprises anthracenyl or naphthylene groups.

Claim 36. (previously presented) The method of claim 18 wherein the photoresist layer is exposed with radiation having a wavelength of about 193 nm and the antireflective layer comprises phenyl group.

Claims 37-48. (cancelled)

Claim 49. (new) The method of claim 18 wherein the photoresist layer is exposed with patterned radiation having a wavelength of about 193 nm.

Claim 50. (new) The substrate of claim 1 wherein the antireflective composition comprises the antireflective composition a thermal acid generator compound.

Claim 51. (new) The method of claim 18 wherein the antireflective composition comprises a thermal acid generator compound.